REMARKS

1. Priority document

As requested, applicant submits herewith the certified copy of the priority application, JP 2002-223673.

2. Abstract

Applicant here has revised the Abstract to be in one paragraph.

3. Renumbering of claims

The Examiner noted an error in numbering of the claims in the Second Preliminary Amendment as filed. The claims are here renumbered so as be in proper numerical sequence. Dependency on claims whose number has been corrected is here amended to reflect the new number.

4. Claim status

Claims 1 to 12 have been canceled without prejudice.

Independent claim 13 and its dependent claims 14 to 21 have been rejected as unpatentable under § 103 over U.S. patent no. 5,325,230 to Yamagata et al. or U.S. patent no. 5,086,325 to Yamagata et al. Reconsideration of the rejections of claims 13 to 21 is respectfully requested.

Claim 13 has here been amended to recite a process that comprises providing an optical part formed of a synthetic quartz glass optical material having an OH group concentration in a range of 5 to 30 ppm, a contained hydrogen molecule concentration in a range of 2×10^{18} to 2×10^{19} molecules/cm^3, and a transmittance of 99.9% or more of ultraviolet rays having a wavelength of 245 nm. The synthetic quartz glass optical material is formed so as to have a fictive temperature in the range of 880 to 990°C. The process further comprises the step of irradiating the optical part with a higher harmonic YAG laser with a third or higher order of harmonic.

The claimed process allows for an extended use of the optical part with the YAG laser which is not available or suggested by prior art systems, such as the cited Yamagata patents.

U.S. patent no. 5,325,230 to Yamagata et al. (hereinafter "Yamagata '230") suggests the exposure of synthetic quartz glass to a laser, which may be, *inter alia*, a YAG laser. See e.g., Yamagata '230, claim 6. However, Yamagata '230 does not suggest a synthetic quartz glass optical material having the OH group concentration and fictive temperature as recited in claim 13.

With respect to the OH group concentration, Yamagata '230 teaches a glass with an OH concentration of at least 50 ppm. See Yamagata '230, col. 6, lines 9 to 10, see also Abstract, line 11 - 13. This is well outside the claimed range of 5 to 30 ppm recited in claim 13 as amended.

With respect to the fictive temperature, Yamagata '230 is completely silent as to the fictive temperature of its glass. The fictive temperature is not, as the Examiner suggests, an inherent quality of the composition of the glass. Rather, the fictive temperature is essentially set by the process of making the glass material, by controlling the rate of cooling of the glass. See

specification, page 7, lines 11 to 16 and page 8, lines 15 to 21, wherein appropriate cooling is described to obtain the recited synthetic quartz glass optical material with a fictive temperature of 880 to 990°C.

Claim 13 recites a process in which the recited composition of the synthetic glass optical material is outside the ranges of Yamagata '230, and which is formed by a step that is nowhere mentioned or suggested in Yamagata '230, with the resulting process being superior to that of the prior art. Reconsideration of the rejection based on Yamagata '230 is therefore respectfully requested.

U.S. patent no. 5,086,325 to Yamagata et al. (Yamagata '325") also fails to suggest optical material with the claimed OH group concentration, and is similarly silent as to the step producing the glass with a fictive temperature in the range of 880 to 990°C. Claim 13 distinguishes over Yamagata '325 for reasons similar to those expressed with respect to Yamagata '230. Reconsideration of the rejection of claim 13 based on Yamagata '325 is therefore also respectfully requested.

Claims 14, 16 to 21 and new claims 22 to 24 depend directly or indirectly from claim 13, and therefore are allowable therewith.

Information Disclosure Statement

Applicant submits herewith a new Information Disclosure Statement listing the references from the International Search Report for the international application for which this application is the U.S. national stage. A check in the amount of $180.00 is enclosed to meet the fee for submission of these references after first action. Should the check be insufficient or not found, please deduct any fee necessary for the consideration of this Information Disclosure Statement from deposit account 501659.

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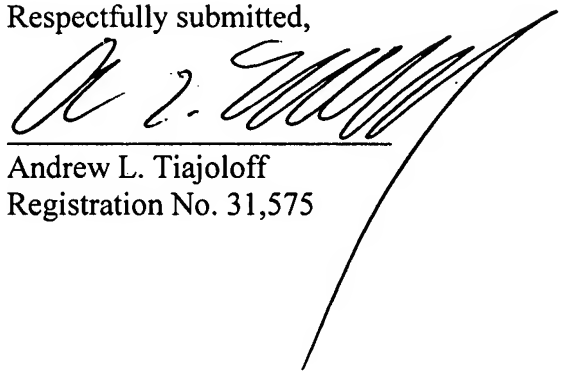
All claims having been shown to distinguish over the prior art in structure, function and result, formal allowance is respectfully requested.

Should any questions arise, the Patent Office is invited to telephone attorney for applicants at 212-490-3285.

Respectfully submitted,



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